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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,631	02/15/2000	William J. Beyda	00P7463US	8142
7590	10/27/2003		EXAMINER	
Siemens Corporation Intellectual Property Department 186 Wood Avenue South Iselin, NJ 08830			TSEGAYE, SABA	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/504,631	BEYDA ET AL.
	Examiner Saba Tsegaye	Art Unit 2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 07 August 2003.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-5,7 and 9-13 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-5,7 and 9-13 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on 07 August 2003 is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. Claims 1, 9 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Olafsson et al. (US 6,317,419).

Olafsson discloses, in Fig. 3, a PCM modem system 300 (claimed a local modem), user modem 312 (claimed a remote modem), a digital impairment learning element 324 (claimed a timing unit) and an echo cancellation unit 328 (column 10, lines 45-63; column 11, lines 15-30).

2. Claims 1, 9 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Tal et al. (US 5,909,384).

Tal discloses, in Figs 1 and 2, a modem A 22 (claimed a local modem), a modem B 46 (claimed a remote modem), a delay 62 (claimed a timing unit) and an echo canceller 60 (column 5, line 45-column, line 15).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5, 7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olafsson et al. ('419) in view of Knittle et al. (US 5,761,638).

Olafsson discloses all the claim limitation as stated above. Further, Olafsson discloses that transmitter configured to transmit signals over a downstream communication channel and a receiver configured to receive signals over an upstream communication channel where echo signals follow an analog echo path from the transmitter to the receiver. The transmitter transmitting a training signal, determining, in response to the training signal, digital impairments present within the echo path, and obtaining, in response to the training signal, the transfer characteristics of the echo path.

However, Olafsson does not expressly disclose: the data component comprising a sinusoid at a predetermined frequency and at differing amplitudes (as in claims 2, 3, 5, 7, 10 and 11); determining delays between peaks of the return training sinusoid and peaks of the echo signals (as in claims 4, 12, 5 and 7).

Knittle teaches, in Fig. 2D, signals at a predetermined frequency and at differing amplitudes (column 7, lines 25-28). Further, Knittle teaches that the echo delay estimate of the channel is determined by measuring the elapsed time between transmission of the original chirp signal and the occurrence of the largest peak in the  $\sin(x)/x$  pattern of the output signal of the echo parameter estimation circuitry 32.

It would have been obvious to one ordinary skill in the art at the time of the invention was made to add a method that determine delays between peaks of the return training sinusoid and peaks of the echo signal, such as that suggested by Knittle, in the method of Olafsson in order to determine the echo delay estimate of the channel to a high degree of accuracy (column 5, lines 1-10).

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-5, 7, and 8-13 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (703) 308-4754. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

ST  
October 17, 2003



JOHN PEZZLO  
PRIMARY EXAMINER